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A FORTY ACRE BIRD CENSUS AT SACATON, ARIZONA

By M. FRENCH GILMAN

THE FORTY ACRES on which this bird census was taken in the spring and early summer of 1914, may be described in ten-acre tracts. Of the first ten acres half is devoted to an Indian Day School, which consists of school-house, dwelling and barn, to the school garden, and to an incipient orchard. There are a few young cottonwoods growing here, two umbrella and two mulberry trees, and some young grape vines, date palms and pomegranates; also a few scattered mesquite trees that were topped once and have sent up a second growth. An irrigating ditch runs through the grounds and occasionally has water in it. A horse-trough always filled with water stands in the corral, and is an attraction to the birds. In season I always have some pieces of watermelon in the shade of a young cottonwood, and many birds resort to these for refreshment. The Gila Woodpeckers in particular seem to have developed the watermelon habit to a marked degree. In the hottest weather I try to keep water in a basin hollowed out around one of the young cottonwood trees, and this furnishes drink and a bath to many species. The other half of this ten acres has been partly cleared, but has a few scattered second-growth mesquites, quite an area of salt-bush (*Atriplex polycarpa*), and several clumps of *Lycium fremonti*, or squaw-bush, as it is called locally.

The ten acres lying to the south of the tract just described is in cultivation, wheat, barley, corn and alfalfa being raised on it. Along the fences and ditches on this tract are a few mesquites, squaw-bushes, and some burro-weed (*Dondia torreyana*.) Of the ten acres west of this area about one-third is cleared and partly cultivated, one-third is covered with dense second-growth mesquite mixed with a few catsclaws (*Acacia greggii*), jujube (*Zizyphus lycioides*), *Lycium fremonti*, and three species of salt-bush, *Atriplex polycarpa*, *A. canescens* and *A. lentiformis*. The other third of the tract is sparsely covered with the same sort of growth, but with *Atriplex polycarpa* predominating. The last ten acres of the tract under observation is about the same as the last third section just described, that is, covered with a sparse growth of the plants mentioned.

The following list of nests found probably does not contain all that were occupied during the present breeding season, as I did not make a systematic search of the entire tract until late in the year, and a few of the earliest breeders may have escaped notice. Where there is reason to believe any find is a second set it is so stated.

Oxyechus vociferus. Killdeer. A nest with three eggs found on plowed ground in the school garden. The three eggs hatched and the young probably were safely raised, as I saw them at different times in fields nearby. The eggs were found about April 1, and on June 14 I found three more eggs in the same nest depression. As a Killdeer's nest is easily and quickly scratched out and made ready for occupancy there seems no particular reason for a second set in the same place, unless, from the successful outcome of the first set, the bird considered it a good safe location. Two of this set were hatched, one egg being found with a hole in it the day the young left the nest. This departure seems to take place the same day they hatch.

Lophortyx gambeli. Desert Quail. Five nests were found in the confines

of the school acreage, and one in the northwest ten acres. One of the nests was out in the open near the irrigating ditch, and had no shelter whatever. It was on the gentle slope of a small depression, and children passed near it every day on their way to school. April 7 it had seven eggs in it, and the bird continued to deposit them till May 6, when the eighteenth was in the nest. When I found the nest I was afraid the hot sun would cook the eggs, so threw down a plank in a careless manner nearby. I moved it a little nearer each day until it shaded the eggs most of the time, the old bird apparently paying no attention to the intrusion, as she kept on with the work of filling the nest with eggs. Soon after the set was complete she left the nest, or was caught or killed, as the eggs remained uncared for until May 31, when I took them. It was a job to blow them, as long exposure to the sun had hardened and dried the contents of many.

Two nests were in the school woodpile, containing nineteen and thirteen eggs, respectively. Another, in a pile of short boards and kindling about ten feet from the school woodshed, had seven eggs in it. The nest out in the fields had nine eggs, and was at the base of a Lycium bush. About the middle of June I put some straw in an old nail keg, open at one end, and placed it on its side in the forks of a mesquite tree about two feet from the ground. The mesquite had some saplings starting from the trunk that sheltered the keg. June 24 I found that a quail had moved in and had laid two eggs. Later she completed the set, only eight eggs, and successfully hatched all but one. She was quite tame on the nest, and would not be scared off by any mild measures. I tried hammering on the rear of the keg, rolling it gently and talking to her, requesting her to get off and let me count the eggs, but unless I put in my hand at the front of the keg she sat pat.

Zenaidura macroura marginella. Western Mourning Dove. Eleven Mourning Dove's nests were found in the limits of the forty acres. Eight were in mesquites, two in Zizyphus and one in a catsclaw bush. The average height was seven feet. The latest date was July 23, when two nests were found, one with fresh eggs, the other with eggs about half incubated.

Melopelia asiatica trudeaui. White-winged Dove. One nest with young was found, and this a few feet outside the limits of the forty acres, though many of the birds fed over the tract. The absence of large mesquite trees was the reason for the lack of nests, as these birds seem to prefer to build higher up in the trees than do the Mourning Doves. Both species frequent the school yard, the Mourning Doves to eat the weed and flower seeds, particularly those of the California poppy, and the White-wings to eat the watermelon I put in the back yard for them.

Scardafella inca. Inca Dove. A brood was raised in a mesquite tree not far from the house, and a second set laid in the same nest June 21. A few days later the eggs disappeared. These little birds frequent houses and yards, but seem slow to come around a new establishment. The house here has been built three years, this being the fourth summer, and the birds have just adopted it. Last summer a pair came and looked it over, staying a few days, and this year they settled here.

Geococcyx californianus. Roadrunner. A nest with four young nearly grown was found on June 7, in a mesquite about five feet from the ground. When I looked into it two of the birds jumped from the nest, and would not stay when put back. The others remained, as they were smaller. Another

nest was found July 11 a few rods away, also in a mesquite, and seven feet from the ground. This nest contained four eggs partly incubated, of which one hatched July 20, the others on the three succeeding days. This would indicate that the bird starts incubating with the first egg. The mother was very anxious about the eggs, and ran around close to me in a mammalian sort of way, flat on the ground, tail dragging, and head stretched out in front only about three inches from the soil. She did not look like a bird at all, and though making no fluttering demonstration, her antics were calculated to excite curiosity and distract attention from the nest. This nest may have been the second set of the owners of the first one found.

Chordeiles acutipennis texensis. Texas Nighthawk. A pair of these birds was flushed in a certain location each trip I made, but no nest could be found. The place was not favorable for finding the eggs, and I firmly believe the birds were nesting there.

Tyrannus verticalis. Western Kingbird. A nest with two eggs in top of mesquite about fifteen feet from the ground. Another with three eggs in young cottonwood tree only eighteen feet from our back door. The location, in the forks of the tree about eleven feet from the ground, was not favorable for nest-building and the wind kept blowing it down until I fastened a few wires for a support. Then a Bendire Thrasher came and tried to take the site away from the Kingbirds. The Thrasher would bring some nesting material, and settle down in the nest. Then the Kingbirds would appear, scolding and trying to drive her away. As long as they kept flying at her she stayed on the nest, but if one came close and alighted she would fluff out her feathers and make a vicious dive at him, or her, as it might be. Had her mate been as much on the job the Kingbirds would have lost out, but he sang and did nothing else, so she finally gave it up, and the Kingbirds raised three young.

Molothrus ater obscurus. Dwarf Cowbird. Two eggs found in the nest of a Plumbeous Gnatcatcher in a Zizyphus bush. Many of the Cowbirds stayed in the barnyard and ate watermelon in our back yard, but they had to search farther afield for more Gnatcatcher's nests.

Agelaius phoeniceus sonoriensis. Sonora Red-winged Blackbird. A pair built a nest in a clump of mesquites at the edge of an alfalfa field, but deserted it, probably to join a small colony nesting in some willows along an irrigating ditch about a quarter of a mile distant.

Icterus bullocki. Bullock Oriole. One nested in a young cottonwood near the house and raised four young. Another had a nest with three eggs about nine feet up in a Zizyphus shrub. Two others were in mesquite trees, eight and fifteen feet from the ground, respectively, and contained four eggs each.

Pipilo aberti. Abert Towhee. Eight nests found, with two and three eggs to the set. Three nests were in mesquites, two in Dondia bushes, two in Zizyphus shrubs, and one in an umbrella tree. The average height from the ground was five and one half feet. One nest was empty, with a blacksnake coiled round it, and the birds in distress nearby. I tried to secure the snake in order to determine how many eggs or young the nest had contained, but he escaped. The latest date was July 23, when three eggs partly incubated were found. This late set may have been a second one.

Cardinalis cardinalis superbus. Arizona Cardinal. A Cardinal raised three young in a mesquite in the dense growth already described, and later, July 1, built another nest and started incubating on two eggs. I watched to

see how long incubating would take, but at about the time the young were due one egg disappeared, while the other had a hole in it and proved infertile. This pair of birds has frequented the yard for two years, and has become quite friendly, coming to a bird table for food and eating the watermelon I put out in the shade. They brought the three young ones to the house and gave them watermelon until they learned to feed themselves.

Phainopepla nitens. Phainopepla. A pair had a nest in a mesquite near the west line of the tract, where they raised two young. They nest most frequently in the old growth of mesquites that have much mistletoe growing in them.

Lanius ludovicianus excubitorides. White-rumped Shrike. A pair raised five young in a squaw-bush along one of the fences. In a mesquite tree not far away I found the hind legs of a young rabbit hung over a thorny branch, but the Shrikes may not have been responsible for this!

Mimus polyglottos leucopterus. Western Mockingbird. A pair raised a brood in the mesquite thicket but I did not find the nest till the young birds had flown. The old ones brought them up around the house for refreshments later, and then probably went to work on a second set, as I found a nest with two eggs July 7 not far from the first one. As it happened, however, this was about fifty yards outside the lines so cannot be counted.

Toxostoma bendirei. Bendire Thrasher. Eight nests were found with three eggs each. Seven were in mesquites and one in a Lycium, the average height from the ground being eight feet. One pair built a nest in a mesquite at the bottom of the date grove and hatched three young, these leaving the nest about the first of May. The 15th of May the female began fighting the Kingbird for the nesting site as I have already related. After the Kingbirds drove her away she went to her old nest in the mesquite and raised three more young in it, the young leaving the nest July 6. At this date of writing she has another nest in the same tree a few feet from the twice used one, and is incubating three more eggs. She is surely some "mother in Israel". As the other five nests were not close together, possibly none of them were "repeaters". There is one exception that may have been a second set as it was found so late, July 11, though not near any other found before.

The Bendire Thrasher is one bird that from all indications takes kindly to settlement. These birds nest near houses, on which they perch to sing, come into the yards, and seem fearless if not molested. If their natural shelter is cleared up they take kindly to artificial or planted growth and I believe will persist in the face of civilization. All this, of course, provided that they receive some measure of protection and encouragement.

Toxostoma crissale. Crissal Thrasher. Only three nests found, and one of those probably a second set. All were in mesquites at an average height of four feet. This Thrasher is a bird of the underbrush and thickets, and apparently does not take kindly to clearing and farming operations.

Heleodytes brunneicapillus couesi. Cactus Wren. February 15 was the date when the first nest, with four eggs, was found. This was in a brush shed alongside of the school house, used as an outside class room. The rafters were double, about four inches apart, and I had inserted short boards making a horizontal space about ten inches deep and six feet from the ground. Four roosting nests had been built last fall by the pair of wrens, and February 15 a new nest contained eggs. About the last of April the same pair built a nest on

a board wired in a corner under the floor of a water-tank tower about twenty feet high. The pair of Kingbirds before mentioned as having trouble with the Thrasher, tried to take the nest away from the Wrens, but the owners were too persistent and they gave it up. Last year the Wrens had raised a brood in the same place; after the young had left I tore the nest out and the Kingbirds raised a brood. Hence both factions had some rights, the Wrens the prior right, however, which they made good. Four young were raised here, and on July 8 they were started on another set of four. After the first brood had flown from the tank I removed the old nest, and they soon rebuilt. Three eggs of this set hatched, the fourth being infertile. I might say that last year after the young Kingbirds had left the nest, the Wrens built again and incubated four eggs for three weeks. I then decided that the eggs were infertile, which proved to be the case. Besides the three nests of this pair of Wrens, five others were found, four in mesquite trees and one in a Zizyphus.

Auriparus flaviceps flaviceps. Verdin. Three nests in the mesquite thicket, two in Zizyphus shrubs, and one in a mesquite. They seem to breed usually but once a year, though there may be exceptions.

Poliophtila plumbea. Plumbeous Gnatcatcher. One nest in a Zizyphus five feet from the ground, with two Gnatcatcher's and two Dwarf Cowbird's eggs.

A total of sixty-six sets was found on the forty acres, representing eighteen species; this not counting the pair of Redwinged Blackbirds which deserted their nest, the Texas Nighthawk of which the nest was not found, nor the White-winged Dove, just out of bounds.

Sacaton, Arizona, July 25, 1914.

SOME PARK COUNTY, COLORADO, BIRD NOTES

By EDWARD R. WARREN

WITH TWO PHOTOS BY THE AUTHOR

I SPENT the last two weeks of September, 1914, in the western part of Park County, Colorado, collecting mostly mammals but some birds also, and the notes I made in a comparatively little known portion of the State, and at a season when the migratory movements are on, seem sufficiently interesting to be published.

Park County covers the geographical center of Colorado, comprises the well known South Park, and is bounded on the west by high mountain ranges. The place which I made my headquarters, with the exception of the first two days, was Alma, one of the oldest mining camps in the State, at an elevation of 10,235 feet. The first two days were spent at Fairplay, also an old mining camp and the county seat, its altitude being 9,900 feet. It was not very favorably situated for the work I wished to do, therefore I moved to Alma, five miles above, and spent the remainder of my time there.

To reach these places I took the South Park Railroad, a narrow gauge, from Denver, going up the South Platte River 29 miles, then up the North Fork of the South Platte 40 miles farther to Webster, then climbing Kenosha